Amendments to the Claims

This listing of the claims replaces all prior versions and listing of the claims in the present application.

Listing of Claims

1. (currently amended) A method for performing admission control in order to offer assurances on forwarding quality in networks comprising the steps of:

setting a threshold for each link where said threshold defines a maximum sum of forwarding resources requested by applications for their application data flows, ADFs, on the link;

repeatedly measuring, during usage, multiplexing properties of the aggregated ADFs on each link, wherein the measuring occurs at a rate that is lower than the maximum sum of forwarding resources;

dynamically adapting ~~choosing~~ the level of said threshold by utilising the measured ~~knowledge about~~ multiplexing properties of the ADFs on each link and by utilising knowledge about the forwarding resources of the links; and

preventing an overload before it occurs by controlling admission to each link based on the dynamically adapted threshold.

2-4. (canceled)

5. (currently amended) A method according to claim 1, ~~characterised by~~ further comprising the step of setting an

initial threshold for each link ~~and repeatedly, during usage, measuring multiplexing properties of aggregated ADFs online on each link and use these measurements to dynamically adapt said thresholds during usage~~.

6. (previously presented) A method according to claim 5, characterised by choosing the initial threshold by estimating multiplexing properties of different ADFs off-line, said estimation being based on results from preparatory tests of recorded samples of ADFs, which are expected on a link and use this estimation when choosing the level of said threshold.

7. (previously presented) A method according to claim 5, characterised by performing the measurements at least two different rates.

8. (previously presented) A method according to claim 7, characterised by measuring at a first rate, which is equal to or lower than the amount of allocated resources on the link and measuring at a second rate, which is lower than the first rate.

9. (original) A method according to claim 8, wherein the second rate is dependent on the reserved resources on the link and the threshold.

10. (previously presented) A method according to claim 7, characterised by

increasing the threshold when both the measurement at the first and second rates indicate lower loss-rates than what is assured;

decreasing the threshold when both the measurement at the first and second rates indicate higher loss-rates than what is assured; and

maintaining the threshold when the measurement at the second rate indicates higher loss-rate than assured and the measurement at the first rate indicates lower loss-rate than assured.

11. (previously presented) A method according to claim 5, characterised by introducing a measurement threshold, which defines a level of forwarding capacity reservations on the link above which the measurements are initiated.

12. (original) A method according to claim 11, characterised by increasing the measurement threshold in steps but not over a predefined maximum level which is lower than the level of allocated resources of the link when the measurement at the second rate indicates higher loss-rate than assured and the measurement at the first rate indicates lower loss-rate than assured.

13. (previously presented) A method according to claim 8, characterised by measuring at a third rate, which is higher than the first rate but equal to or lower than the allocated resources of the link when the measurement at the first rate indicates a higher loss rate than assured, the loss rate measured at the third rate being indicative of if it is necessary to pre-empt ADFs from the link or if it is enough to prevent new ADFs from entering the link.

14. (previously presented) A node in a network comprising software for performing admission control in order to offer assurances on forwarding quality in networks and software for setting a threshold for each link, said threshold defining a maximum sum of forwarding resources requested by applications for their application data flows, ADFs, on the link, characterised in that said node further comprises software for performing the method in claim 1.

15. (previously presented) A node in a network according to claim 14, characterised in that it comprises or is connectable to a measuring means adapted to perform measurements on the links.

16. (currently amended) A computer program product directly loadable into the internal memory of a processing means within a computer placed in a node, the computer program product being embodied in a medium readable by the computer, wherein the medium readable by the computer comprises ~~and comprising~~ the software code means for performing the steps of claim 1.

17. (currently amended) A computer program product embodied in a computer-readable medium, the computer-readable medium comprising a readable program for causing a processing means to control an execution of the steps of claim 1.

18-30. (canceled)

31. (new) A device for performing admission control in order to offer assurances on forwarding quality in networks, the device comprising:

means for setting a threshold for each link where said threshold defines a maximum sum of forwarding resources requested by applications for their application data flows, ADFs, on the link;

means for repeatedly measuring, during usage, multiplexing properties of the aggregated ADFs on each link, wherein the measuring occurs at a rate that is lower than the maximum sum of forwarding resources;

means for dynamically adapting the level of said threshold by utilising the measured multiplexing properties of the ADFs on each link and by utilising knowledge about the forwarding resources of the links; and

means for preventing an overload before it occurs by controlling admission to each link based on the dynamically adapted threshold.

32. (new) The device of claim 31, further means for setting an initial threshold for each link.

33. (new) The device of claim 32, further comprising means for choosing the initial threshold by estimating multiplexing properties of different ADFs off-line, said estimation being based on results from preparatory tests of recorded samples of ADFs, which are expected on a link.

34. (new) The device of claim 32, further comprising performing the measurements at least two different rates.

35. (new) The device of claim 34, comprising means for measuring at a first rate, which is equal to or lower than the amount of allocated resources on the link and for measuring at a second rate, which is lower than the first rate.

36. (new) The device of claim 35, wherein the second rate is dependent on the reserved resources on the link and the threshold.

37. (new) The device of claim 34, further comprising,

means for increasing the threshold when both the measurement at the first and second rates indicate lower loss-rates than what is assured;

means for decreasing the threshold when both the measurement at the first and second rates indicate higher loss-rates than what is assured; and

means for maintaining the threshold when the measurement at the second rate indicates higher loss-rate than assured and the measurement at the first rate indicates lower loss-rate than assured.

38. (new) The device of claim 32, further comprising means for introducing a measurement threshold, which defines a level of forwarding capacity reservations on the link above which the measurements are initiated.

39. (new) The device of claim 38, further comprising increasing the measurement threshold in steps but not over a predefined maximum level which is lower than the level of

allocated resources of the link when the measurement at the second rate indicates higher loss-rate than assured and the measurement at the first rate indicates lower loss-rate than assured.

40. (new) The device of claim 35, further comprising measuring at a third rate, which is higher than the first rate but equal to or lower than the allocated resources of the link when the measurement at the first rate indicates a higher loss rate than assured, the loss rate measured at the third rate being indicative of if it is necessary to pre-empt ADFs from the link or if it is enough to prevent new ADFs from entering the link.